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DRIED, LIQUID AND FROZEN EGG MEMORANDUM NO. 10

To: All Resident Samplers and Resident Supervisors of Egg Processing Operations

From: Henry G. F. Hamann, Senior Marketing Specialist, Inspection and Grading Division, Dairy and Poultry Branch

Subject: Duties of Resident Dried Egg Samplers and/or Resident Supervisors of Egg Processing Plants Preparing Liquid or Frozen Eggs, who are Assigned to Such Plants on a Contract Basis.

The duties of the resident dried egg samplers and/or the resident supervisors of egg processing operations shall be as follows:

1. To check the method of handling shell eggs to see that they are properly cooled previous to candling. (Shell eggs should be cooled to produce egg meats not over 60 Degrees F.).
2. To examine the candling room to see that it is adequately darkened, properly equipped, and kept in a proper sanitary condition.
3. To examine a sufficient number of shell eggs as candled by each candler prior to breaking to determine that:
 - (a) Inedible eggs are removed.
 - (b) Dirties, i.e. eggs with foreign material adhering to the shells that in handling in pails or conveyors, or when breaking might become detached, are separated and are properly washed and the shell dried before breaking.
 - (c) Leakers resulting from candling and checks are properly placed in trays and are broken out by skilled personnel. (Leakers that are removed from cases before candling, should not be used).
 - (d) Sanitary conditions are maintained at all times and that inedible eggs are properly disposed of by placing them in suitable containers for disposal without breaking and that such eggs are denatured and removed from the building regularly. The denaturing should be done by spraying with methylene blue dye or other suitable denaturant. Fillers, flats, and empty cases should be removed from the candling room. Trash barrels with strong odors should not be permitted in the candling room.
 - (e) Buckets or other containers into which shell eggs are placed prior to breaking are kept in a clean and sanitary condition.
4. To check carefully the breaking room operations and to make sure that proper procedures are followed which conform with the sanitary requirements as outlined in Tentative Standards for Sanitary Conditions of Plant, Equipment, Operating Procedures, etc. with regard to the following:
 - (a) General appearance and sanitary condition of the room.

(b) Handling of shell egg buckets so they do not come into contact with or pass over liquid eggs, liquid egg containers, or drip trays and are not nested after cleaning.

(c) Number of eggs broken into each cup (not over three eggs should be broken into a cup and the cup should not overflow).

(d) Breaking eggs carefully and exercising sanitary precautions in removing shell particles. Do not use fingers.

(e) Observing and smelling broken eggs before emptying cups.

(f) Prompt examination of questionable eggs by qualified personnel.

(g) Rejection of eggs classed as loss or inedible. This includes bloody whites, large blood spots, large unsightly meat spots, black rots, white rots, mixed rots (addled eggs), sour eggs, eggs with green whites, eggs with stuck yolks, moldy eggs, musty eggs, eggs showing blood rings, eggs containing embryo chicks (at or beyond blood ring stage), and any other eggs that are filthy, decomposed, or putrid.

(h) Disposition of rejected meats into properly identified containers.

(i) Cleaning and sterilization of cups, knives, and drip trays after breaking blood rings, sour, musty, moldy, green whites, or other rotten eggs.

(j) The frequency of emptying buckets into churns or vats and the checking of odor before being emptied. Fingers should not contact inside surfaces of containers when handling.

(k) The removal of shells from the breaking room during breaking operations.

(l) The frequency and adequacy of cleaning and sterilizing the breaking room equipment (tests should be made of chlorine solution or other non-toxic detergents, sterilizing cabinets, steam sterilizers, and hot water temperatures to see that they are proper and adequate).

(m) See that the temperature of the liquid eggs is reduced to 45 Degrees F. or less within thirty minutes.

5. To see, when possible, that shell eggs taken into the breaking room carry the identity of the candler.

6. To observe closely the methods of operation, maintenance of equipment and sanitary condition throughout the plant. A daily record shall be kept of such points as are covered by the daily report form which will be furnished for this purpose. Other reports or records may be used to supplement this daily report at any time it is considered necessary or desirable to use such reports to give a more complete and accurate record of plant operations.

7. To check frequently the scales used for weighing dried eggs and frozen eggs when sold to the Government (particularly at the weights more frequently used) and when found to weigh incorrectly or to be in need of adjustment immediate steps shall be taken to have them corrected or adjusted by an

official sealer of weights and measures.

8. If at any time any conditions or practices are being followed that are not in line with these instructions or the Tentative Sanitary Requirements for plant operations, a verbal report shall be made to the plant manager or person designated by him with the request that they be corrected. If such conditions are not corrected within a reasonable length of time, the resident sampler or supervisor shall prepare a written report stating the conditions or practices needing correction, furnishing immediately one copy of this report to the plant management, one to his immediate supervisor, or to the regional supervisor, one to the Washington office and retaining one copy for his own files. If such conditions are serious, he shall phone or wire collect to the Washington office with reference thereto and for further instructions.

9. To observe any matters concerning plant operations, methods used or the character and use of any machinery or equipment that needs change or adjustment. However, unless such changes or adjustments are minor in character, he shall report his observations and recommendations either directly or through his supervisor to one of the technical advisory staff representing the F.D.A., who in turn shall visit or arrange for some other technician to visit the plant in question, survey the situation and make any pertinent and needed recommendations. It is important that resident samplers and resident supervisors as well as their immediate supervisors and the regional supervisors do not attempt to give technical advice that involves an important revision of methods or extensive structural, functional or engineering changes but that they shall work closely with and report their opinions of such needed changes to the technical advisory staff of F.D.A.

The technical advisory staff on its visit to plants and in their contacts with supervisors shall be helpful with suggestions to resident samplers, resident supervisors and their supervisors, but they are not to assume authority for the supervision of the duties of the resident personnel unless requested to do so. They shall, however, report to the immediate or regional supervisor for follow-up and advise any particulars in connection with the duties or activities of resident samplers or supervisors which, in their opinion, need correction.

It is particularly important that the cooperative relationships between the two groups be maintained on a most cordial and mutually helpful basis.

10. In the event of a breakdown in the plant, to observe carefully the care given to liquid eggs which may be in holding tanks or churns; also to observe the condition, odor and temperature of such liquid eggs when operations are resumed.

In addition to the duties outlined above, the resident supervisor of egg processing (breaking and freezing) operations shall have the following duties:

1. Issue a daily report of production (on a form to be furnished) in an original and three copies, giving the volume of eggs processed and check weighed, together with identification marks. These daily reports will carry a statement that the eggs were processed under the supervision of a resident supervisor. The original copy of the report together with one carbon copy shall be given to the firm in order that they can transmit a

copy with any liquid or frozen eggs which they may sell to other firms; one copy shall be retained by the supervisor of processing, and one copy shall be sent daily to the regional supervisor. As soon as the regional supervisor has examined the copy forwarded to him, or in the case of his prolonged absence, this copy should be forwarded to the Washington office for filing.

2. Test weights shall be made when the product is sold to the Government by (a) tare-weighing a sufficient number of empty containers at various intervals to obtain an accurate average tare weight, and by (b) gross-weighing at least ten percent of the filled containers and determining the average net weight by deducting the average tare weight.

3. Mark, or supervise the marking of a USDA identification number on each can or container filled with liquid eggs that subsequently may be used for drying. A stamp will be furnished with which the "USDA Lot _____" may be applied. The supervisor should retain control of the USDA stamp at all times and should not apply or permit the USDA stamp to be applied on any containers of liquid or frozen eggs except those processed during his hours on duty. An eight banded stamp, with letters not less than one-fourth inch in height should be used to apply the USDA lot number. This stamp should be furnished by the firm. Each official supervisor will use the first three bands of the stamp for his identification number, the next three for the day of the year. The last two bands should be used to indicate lot numbers or churn numbers, if the separate churns are marked. The supervisor's license number is listed on his license card and the last three numbers on it should be used as his identification number. A supervisor with the number 015 would stamp the containers 01502508 for eggs processed on January 25 and for churn or lot number 8. Each resident supervisor shall be sure that the stamp applied carries the proper identification number assigned to him. Cans shall be marked just to the right of the seam at the upper part of the can (low enough so the lid will not cover the mark). If round fiber containers are used, they should be marked in a similar manner. If square containers are used, they should be marked in the upper righthand corner of any side. (If the sides vary, a uniform procedure should be used in each plant in order to facilitate locating the USDA stamp). The resident supervisor should not mark or permit to be marked with a USDA lot number stamp any container of liquid eggs from churnings containing eggs not considered satisfactory for use in drying eggs to be delivered on F.S.C.C. contracts. If any egg meats or frozen eggs are unfit for human consumption, he should request their disposal into channels not for human food and should make suitable follow-up to make sure of such disposal. If such eggs are not so disposed of, he shall report the facts immediately to his supervisor, who shall make immediate report to the Washington office which shall advise the Food and Drug Administration.

4. See that a suitable stamping ink is used in marking metal cans, in order that the marks will not spread or run when they get wet. It is probable that the firm will have a satisfactory ink for this purpose, but if they do not, contact a local dealer handling ink and obtain an "opaque pad ink" or some ink having similar qualities. If unable to obtain locally, advise the Washington office and arrangements will be made to furnish a supply.

5. Check the containers used to be sure they are clean. If cans are re-used, they should not only be carefully checked for cleanliness, but also to be sure that any previous identification marks or USDA lot numbers have been removed.

6. See that containers, after being filled from the churn, move promptly into the freezing room or freezing room in cold storage warehouse. The temperature of the liquid eggs, as it comes from the churn should be checked frequently.
7. If a laboratory analysis is requested by the firm, the resident supervisor shall take samples from each churning or lot. These samples shall be taken with sterile equipment and be placed in clean, sterile, approved containers, promptly cooled and frozen. They shall be suitably prepared for shipment to the laboratory by the use of dry ice. The cost of the laboratory analysis and any expenses incurred shall be paid by the firm requesting the analysis.
8. Check frequently the temperature of the freezing room on the premises or in nearby cold storage warehouse and the method of stacking the containers for freezing. Containers should be stacked to permit air circulation until frozen. It is desirable to have the temperature of the freezing room at -5 Degrees F. or lower. Forced air circulation is desirable and may be essential in order to obtain satisfactorily rapid freezing results. This will depend upon the size of the containers (volume of product to be frozen) and the arrangement and temperature of the room.
9. Check periodically the complete freezing of packages of egg meats. This can be accomplished by using a clean, sharp pointed rod, which should be thrust into the center of the package to determine whether freezing is complete.

Additional duties of resident dried egg samplers shall be as follows:

1. Require the applicant to sign in quadruplicate "Application for Sampling, Weighing, Analysis, and Grading of Dried Eggs". This application can be prepared for individual lots or as a blanket application to cover all product which is to be subsequently sampled.
2. If any provisions contained in "Application for Sampling, Weighing, Analysis, and Grading of Dried Eggs" are not complied with or if the provisions of the purchase contract are not fully complied with, the resident sampler shall follow the procedure for reporting such discrepancy as outlined in paragraph 8 on page 3 of this memorandum.
3. Check the temperature and odor of liquid eggs held in vats and other containers prior to drying.
4. Check the time that the liquid eggs are held between the breaking and drying operations.
5. Check the holding facilities to see that the liquid eggs in vats and other containers are properly protected from dust, contamination, and vermin.
6. Check the entire liquid egg production line to see that it is properly cleaned after each shift.
7. If frozen eggs are used, the manner of defrosting shall be checked and an examination made of as many containers as possible for condition, preferably after thawing. Any sour, moldy, musty, or other off condition eggs shall not be used for drying. All eggs broken after January 1, 1943

for subsequent drying shall have been processed under the supervision of an official supervisor and each container shall have a USDA identification number stamped on it. The firm drying those eggs shall have a copy of the resident supervisor's daily production report, stating that the eggs were processed under official supervision. The USDA lot number should be removed from all empty containers which might be re-used. Such marks can be removed by any suitable means that will not damage the container for re-use. The sampler shall check to be sure that such marks are removed at the drying plant.

8. A check shall be made of the drying room and drying operations on the following points:

- (a) To see that the room is kept clean and orderly during operating hours.
- (b) The temperature of the powder going into containers shall be 95 Degrees F. or below at the time of packaging and down to 85 Degrees F. in twenty-four hours.
- (c) The method of blending the collector powder to make sure it is uniformly blended.
- (d) The amount of screenings obtained daily which shall be shown on the daily report. Sifter screens shall be examined regularly for any breaks or damage. Follow-up shall be made to see that proper disposition has been made of the screenings.
- (e) Observations shall be made of the sanitary conditions in the dust house and disposition of the dust house powder.
- (f) The types or character of any tests made by the plant should be noted by the sampler.
- (g) Observations shall be made to ascertain that regular and proper clean-ups are made of the plant and equipment.
- (h) That batch dryers do not operate more than four hours without being emptied.

9. Test-weights shall be made on all the product produced. If the powder is packed in barrels, tare weights shall be taken of all barrels, complete with liners, heads, and hoops; such weights to be marked on the barrels. Net weights should be checked by deducting the tare weight from the gross weight. When other types of packages are used, representative packages shall be tare weighed from time to time to obtain an average tare weight and test weights determined from such average tare. Not less than ten percent of the packages shall be weighed in order to determine the contract weight.

10. Samples for laboratory analysis shall be taken from representative packages (not less than 5 barrels out of each 4,000 pounds; if containers smaller than barrels used, proportionately more containers shall be sampled or at frequent intervals from the run of powder as it comes from the sifter. These samples shall be prepared, marked, and sent to the laboratory for analysis, together with an original copy of the sampling report. The samples may be sent to the laboratory daily or the samples may be accumulated over a period of several days time, depending upon the desires of the

plant management. Duplicate samples may be furnished to the plant when requested.

11. A composite sample shall be taken from the barrels or other containers sampled in each carlot and mailed to Dr. H. E. Goresline, Bureau of Agricultural Chemistry and Engineering, U.S. Department of Agriculture, Washington, D.C. The following instructions for taking these samples should be used:

As bacteriological tests are made on the composite samples, particular care shall be taken so as not to contaminate the powder in the sampling process. In order to help eliminate any possible contamination from the sampling tube, it would be preferable to run the sampling tube in and out of the dried eggs several times before the composite sample is taken. If the dried eggs are difficult to remove from the sampling tube, use something such as a clean spoon handle to push the dried eggs out --- do not use your fingers. The cans should be full but do not pack the dried eggs into the can with your hands. In general, good sanitary procedure in taking the samples will be satisfactory.

12. The liners and other packaging materials shall be checked to see that they meet the contract specifications under which the product was purchased. If there is any doubt as to the suitability of the liners, a representative sample liner should be sent to Dr. C.J. Kahlenberg, Room 1615, Mallers Building, 5 South Wabash Street, Chicago, Illinois, for testing.

13. The sampler shall see that the liners are properly placed in the barrels or boxes and properly sealed as per dried egg samplers' Memoranda Nos. 7 and 9, and that the liner inserting apparatus is handled in a sanitary manner. The markings on the shipping containers shall be checked to see that they are in accordance with contract specifications, and any containers not properly marked shall be set aside for correction prior to shipment.

14. The loading of cars shall be checked prior to sealing in order to determine that the containers are properly placed and braced so as to assure safe delivery. Check the placing of powder in packages to determine whether there is excessive tamping which may result in caking.

15. The sampler should keep a record of the total daily production of dried eggs and list this on his daily report. When any questionable product is used in the manufacture of any lot of dried eggs, this fact shall be noted on the sampling and test weight report which is sent to the laboratory with the samples or on a separate note or letter which shall be attached to the sampling and test weight report which is sent to the laboratory.

